Shoreline restoration at Assateague Island National Seashore

By Betsie Blumberg

RESTORATION OF NORTHERN Assateague Island (Maryland), undertaken to mitigate the effects of a jetty system built in the 1930s to stabilize the adjacent Ocean City Inlet, is proceeding on schedule. The two-phase project, conducted by the U.S. Army Corps of Engineers in partnership with the National Park Service, addresses the long-term effects of the stabilized inlet on the sand supply for Assateague Island. The jetties have prevented the natural movement of sand along the shore from north to south, resulting in unnatural erosion and accelerated island migration. Since the 1930s, portions of northern Assateague have shifted westward more than 325 yards (297 m).

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The objective of this project is not traditional beach nourishment to protect the shoreline from storm damage or to halt erosion; rather, it is to restore the island's sand budget and ensure that coastal processes continue to dictate the evolution of the island. The transport of sand across the island during storms is a key dynamic influencing both the physical and biological attributes of Assateague Island.

Phase I of the project was the replacement of 1.5 million cubic yards (1.1 million cubic meters) of sand on northern Assateague Island. That operation was completed in 2003. Phase II began at the end of 2003 and will go on for at least the next 25 years: on an annual basis, 150,000 cubic yards (115,000 cubic meters) of sand will be mined in and around the inlet, where it is currently being trapped, and deposited in the surf zone 2 to 3 miles (3.2 to 4.8 km) south of the inlet. This sand will naturally wash up onto Assateague and nourish the island.

The project preserves not only the natural action of the shoreline but also the associated habitat harboring several threatened and endangered species, such as the piping plover (*Charadrius melodus*), sea beach amaranth (*Amaranthus pumilus*), and state-listed endangered tiger beetle (*Cincindella dorsalis media*). A companion long-term monitoring program will evaluate the progress of the project, which may be modified when conditions warrant. ■

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Jetties have prevented the natural north-to-south movement of sand along Assateague Island National Seashore, resulting in unnatural erosion and accelerated island migration. The first phase of a project to restore the island's sand budget and ensure that coastal processes will dictate the island's evolution was completed in 2003. Sand was dredged from a shoal 4 miles (6.4 km) offshore and brought to the Atlantic side of the national seashore by boat where it was pumped as a slurry through a pipeline onto the beach. Bulldozers moved it into place according to the project design. The island has been widened 125 feet (38 m) over a distance of 5 miles (8 km).